

REMARKS

Claim 10 has been canceled and therefore claims 1-9 and 11-15 are pending.

The drawings are objected to on two bases. First, the Patent Office alleges that the semiconductor substrate 10 does not appear in the drawings. However, page 8 of the specification has been amended to indicate that the substrate 10 is not shown in drawings. The substrate 10 is not a structural detail that is essential for a proper understanding of the claimed invention. One skilled in the art will readily realize that all layers shown in the drawing are disposed on top of a semiconductor substrate. Applicants respectfully submit that this objection has been traversed.

Second, the office action alleges that Figs. 1-5 should be designated as "prior art." Applicants disagree. MPEP § 608.02(g) states that drawings that *only* show "prior art" are preferably canceled and not used but, if used, should be designated with the prior art legend. However, in this case, Figs. 1-5 disclose the resultant structures not only from prior art processes but also from the claimed processes. The claimed improvement in this application relates to the processes used to create the structure shown in Figs. 1-5. MPEP § 608.02(d) does not address the issue where drawings illustrate structures created using both prior art and claimed processes. Applicants can find no authority which requires use of the "prior art" legend on drawings which illustrate both prior art and claimed processes. Without such authority, applicants respectfully submit that the objection is improper and should be withdrawn.

The office action also objects to the specification due to an informality on page 9. An appropriate amendment has been made.

Claims 1-15 also stand objected to due to a number of informalities. In response, claims 1, 3, 4, 6-7 and 13 have been amended to address these objections.

Claims 1-15 also stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. In response, numerous amendments have been made to the claims to traverse these rejections. Applicants respectfully submit that all claims are now in full compliance with 35 U.S.C. §112.

Next, the office action rejects claims 1-3 and 15 under 35 U.S.C. §102(a) as being anticipated by applicants admitted prior art. In response, claim 1 has been amended to traverse this rejection. Specifically, claim 1 now recites the sequential MPS doping and in-situ deposition of a nitride film in a common chamber without the cleaning process between these process steps. Support for this amendment appears at

the top of page 4 and on page 9 of the specification. The prior art does not teach or suggest a MPS doping and an in-situ nitride deposition within a common chamber and without any cleaning step performed therebetween. The process of claim 1 is faster and more efficient but not taught by the prior art and avoids the reduction in the phosphor concentration in the lower electrode as recited in the specification.

Finally, claims 4, 9, 11-13 and 15 stand rejected under 35 U.S.C. §103 as being unpatentable over applicants' admitted prior art in view of U.S. Patent No. 6,340,622 ("Lee"). In response, claim 1 has been amended to traverse this rejection. Lee does not disclose the MPS doping immediately followed by a nitride film deposition in-situ in a common chamber. Lee does not teach or suggest MPS doping at all and while such a suggestion can be found in the admitted prior art, neither reference teaches or suggests the step saving technique and the phosphor concentration saving result achieved by the process of currently amended claim 1.

Accordingly, because claim 1 is clearly allowable in view of the admitted prior art, applicants respectfully submit that claim 4 is allowable as well. The rejection of claim 9 is moot in view of the combination of original claims 1, 9 and 10. The rejection of claims 11-13 and 15 are moot in view of the amendment to claim 1 and their direct dependencies from claim 1.

Accordingly, applicants respectfully submit that the obviousness rejection of claims 4, 9, 11-13 and 15 has been traversed.

The office action indicates that claims 5-8 and 10 are allowable. In response, claims 5-8 have been amended to include the features of original claim 1 (rewritten to avoid any §112 problems) and original claims 1, 9 and 10 (again with modifications to satisfy §112) have been combined and applicants respectfully submit that claims 5-9, as presently amended, are allowable.

In view of the above, applicants respectfully submit that this application is now in a condition for allowance and an early action so indicating is respectfully requested.

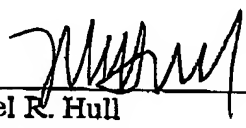
The Commissioner is authorized to charge any fee deficiency required by this paper, or credit any overpayment, to Deposit Account No. 13-2855.

Respectfully submitted,

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December 3, 2003

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